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Inside Wallops

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Astronomers Find Planet Construction Zone Around Nearby Star

NASA astronomers using the new Keck II telescope in Hawaii have discovered what appears to be the clearest evidence yet of a budding solar system around a nearby star.

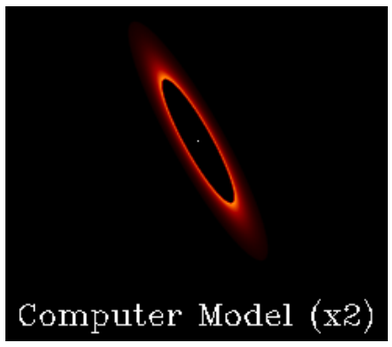
Scientists released an image of the probable site of planet formation around a star known as HR 4796, about 220 light-years from Earth in the constellation Centaurus. The image, taken with a sensitive infrared camera developed at NASA's Jet Propulsion Laboratory (JPL), Pasadena, CA, shows a swirling disk of dust around the star. Within the disk is a telltale empty region that may have been swept clean when material was pulled into newly formed planetary bodies, the scientists said.

HR 4796 was originally identified as an interesting object for further study by Dr. Michael Jura, an astronomy professor at the University of California, Los Angeles. The star, HR 4796, is about 10 million years old and is difficult to see in the continental United States, but is visible to telescopes in Hawaii and the southern hemisphere.

The discovery of the HR 4796 disk was made in just one hour of observing time at Keck, but the JPL team plans to return to Hawaii in June for further studies. They hope to learn more about the structure, composition and size of this disk, and to determine how disks around stars in our galaxy produce planets. They plan to study several other stars as well, including Vega, which was featured prominently in the movie, "Contact."

JPL's use of the Keck telescope is supported by NASA's Origins program, a series of missions to study the formation of galaxies, stars, planets and life, and to search for Earth-like planets around other stars that might have the right conditions for life.

The W. M. Keck Observatory is owned and operated by the California Association for Research in Astronomy, a joint venture between the University of California, California Institute of Technology (Caltech), Pasadena, CA, and NASA. Use of the Keck Observatory for Origins research is managed by JPL for NASA's Office of Space Science, Washington, DC.



The above image shows a computer generated model of the HR 4796 system (doubled in size for clarity). In it, a star is visible in the center. Around it is a disk of material whose inner edge lies at about 50 times the distance from the sun to the earth. Our whole solar system would fit neatly into this "hole".

New Device Detects Plant Stress Earlier

Thanks to a new imaging tool developed at NASA's Stennis Space Center, farmers and foresters may now be better able to detect unhealthy crops and trees before the damage becomes visible to the naked eye.

The Portable Multi-spectral Imaging System, an evolution of the basic color television camera, gives the viewer a picture of which plants are under stress.

The system provides researchers with a new tool for gathering this information. Multi-spectral imaging is the use of several individual parts of the light spectrum to look at objects in different ways and to obtain many different types of information about the objects.

Plant stress can be monitored by observing variations of the plant's reflectance in two specific wavebands of light. Relative levels of chlorophyll can be determined by measuring the plant's reflectance of light in those parts of the spectrum. If the plant is under stress, its chlorophyll production typically decreases, which results in more light being reflected from the plant to the imager.

"When used in this application, the multi-spectral imaging system along with the real-time processor immediately provides the user with an indication of the amount of chlorophyll in the plant's leaves," Spiering explains. "Previously, the process required the recording of multiple images of the same scene. The images were then matched and aligned with each other, processed and then made available for display only on a computer."

Wallops Shorts.....

Balloon Launch

A 3.087 million cubic foot NASA scientific balloon carrying an experiment to flight qualify a universal terminate package and a modified consolidated instrument package was successfully launched April 9 from Ft. Sumner, NM. The principal investigator was Michael Farman, National Scientific Balloon Facility.

Career Fairs

Pam Pittman and **Sandy Bogan** represented Wallops at the Central Middle School Career Fair on April 15.

On April 17, **Linda Thompson** and **Debbie Parks** attended the Parksley Middle School Career Fair.

Tech Fest

Keith Koehler participated in the University of Maryland, Eastern Shore Tech Fest, April 23.

Sounding Rockets Launched

Two Terrier-Black Brant sounding rockets were successfully launched April 18 from the White Sands Missile Range, NM.

The first sounding rocket carried an experiment to measure the temperature and velocity of the interstellar medium in the immediate solar neighborhood, known as the Very Local Interstellar Medium (VLISM). The principal investigator was Dr. Supriya Chakrabarti, Boston University, and the Wallops payload manager was Jan Neville, Code 546.

The second sounding rocket was launched 3.5 hours later and carried an experiment to probe the kinematics of a local interstellar medium and elucidate the production mechanism for the hot gas observed there. Dr. James Green, University of Colorado was the principal investigator, and Bonnie Maxfield, Code 546, was the Wallops payload manager.

Deep Space 1 Launch Rescheduled

The planned July 1998 launch of NASA's Deep Space 1 technology validation mission from Cape Canaveral, FL, has been rescheduled for October. The delay is due to a combination of late delivery of the spacecraft's power electronics system and an ambitious flight software development schedule.

Deep Space 1 is the first launch in NASA's New Millennium program, a series of missions designed to test new technologies so that they can be confidently used on science missions of the 21st Century.

Don't Get Caught in the "Pink" *by Dianne Hargrove, R. N.*

Eight ways you can protect yourself from "pink eye"

The most common eye infection is conjunctivitis — better known as "pink eye". Pink eye occurs when the clear mucous membrane covering the white part of the eyeball and the inside of the eyelids becomes infected. The infection is usually the result of a virus or bacteria, but allergic reactions and chemical irritations also can lead to pink eye.

Pink eye must be treated immediately. Cases can vary from mild redness and watery eyes to very serious infections where vision is impaired or even damaged. It is very important to seek treatment from a qualified eye care professional as soon as possible. Symptoms of pink eye include:

- red and irritated eyes

- waking up with eyelashes stuck together with dried mucous

- sensitivity to light

- a gritty feeling in the eyes

- sticky and/or swollen eyelids

- itchy eyes.

Pink eye also can be extremely contagious. Here are eight ways you can keep pink eye from spreading:

- Avoid touching or rubbing the infected eye(s).

- Wash your hands with soap frequently throughout the day.

- Use paper towels, not cloth towels. If you must use cloth, put the used towel in an area where no one else can use it.

- Wipe away any drainage from the eyes at least twice a day with a clean, wet towel or cotton swab, or as directed by your doctor.

- Use facial tissues, not handkerchiefs.

- Wash any cloth towels, washcloths and linens you have used in a hot water laundry cycle with a good laundry detergent.

- Do not wear contacts or eye makeup until the infection is cured.

- To avoid spreading infectious types of pink eye, keep children or adults home from school or work as directed by your eye doctor.

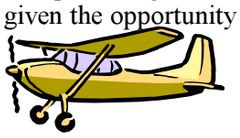
Your eye doctor may prescribe antibiotic eyedrops, ointments or other forms of medication to treat pink eye. Be sure to follow his advice.

Sympathy is extended to the family, friends and co-workers of Elihu W. Cropper who died April 12, 1998. He was employed by H&H Consolidated, Inc. as a painter.

Visitor Center May Events

May 2 — A model rocket launch will be held at 1 p.m. Models of various rockets will be launched. Model rocketeers are invited to bring their own rockets and launch them. The launch will be canceled if it is raining or winds exceed 18 mph.

May 16 — "Flight with Wings" is the subject of a 1 p.m. program for children 6-12 years of age. The 40-minute activity will look at the basic properties of flight and how airplane control surfaces manipulate flight. The children will be given the opportunity to construct paper airplanes.



Saturdays and Sundays — "Puppets in Space," a 10-minute puppet show will be presented at 11 a.m. Puppet astronauts and Sam the monkey will explore space flight, including the space suit. An eight-minute version of the film "Astrosmiles" follows the puppet show.

Sundays — "Humans in Space" is the subject of a 1 p.m. program for children of all ages. The 30-minute program looks at living and working in space, including a review of the astronauts' culinary delights and their wardrobe. The program is followed by a hands-on activity for children. Children will be given the opportunity to create their own "space helmet".

Every day at the NASA Visitor Center, children 5-10 years of age can earn a "Space Ace" certificate and a lithograph by completing an activity sheet during their visit to the Visitor Center.

The Visitor Center is open Thursday through Monday from 10 a.m. to 4 p.m. The complex is closed on Tuesday and Wednesday. For further information, call Chris Hunt, x2298.

Easter Egg Hunt Winners

by Gerry McIntire

Once again, the annual WEMA Easter Egg Hunt that was held Saturday, April 11 was a big hit with local youngsters. There were approximately 90 children participating in the hunt, with at least 100 adults cheering them on. The children had a wonderful time, and no adults would actually admit to helping eat the bounty. Thanks to everyone, employees and visitors, who came forward to volunteer their time.

The Most Candy Found winners in the different age categories are:

Ages 4 and under
Girls--Laura Truitt
Boys--Adam Nock

Ages 5 to 7
Girls--Allison Stancil Boys--Michael Orlando

Ages 8 to 10
Girls--Jordon Mellington
Boys--Dustin Godwin

Graduate Study Program Academic Year 1998-1999

Applications are now being accepted for the Goddard Part-Time Graduate Study Program for the 1998-1999 academic year.

Employees selected *may* be released with supervisory approval for a maximum of 16 hours per week (8 hours/3 credit course) from scheduled work to pursue these studies. Goddard will pay full salary, tuition (justified on a course by course basis), registration, textbook costs and certain course-related fees. In some cases, because of the limited availability of graduate course work in the local commuting area, employees located at Wallops Flight Facility may be considered for full-time graduate study.

Applications must be submitted to the Employee and Organizational Development Office, Code 114, by May 22, 1998. For additional information, contact Program Coordinator, Nichole Richmond, at x66-5757.

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